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DESCRIPTIONS OF NEW CANADIAN ICHNEUMONIDÆ.

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1. *BANCHUS FLAVESCENS*.—♂. Pale yellow; a bilobed mark behind antennæ, extending between them downward upon middle of face, band across vertex from eye to eye, covering ocelli, posterior margin of occiput, maxillary palpi, two apical joints of labial palpi, antennæ above, stripe on middle of mesothorax, dilated anteriorly, a stripe on each side over the wings, basal suture of scutellum, base of metathorax, broader laterally, spot on each side of pleura posteriorly, posterior coxæ within, their femora beneath, apex of their tibiæ, and a broad band at base of four basal segments of abdomen, black; antennæ longer than body, slender at tips; scutellum with an acute dusky spine; wings hyaline, faintly yellowish, nervures brown, stigma and costa pale honey-yellow; posterior coxæ and femora stained with ferruginous; abdomen shining, short, apex broad, truncate and compressed. Length five lines.

Hab.—Ottawa, C. W. (Mr. Billings.) Coll. Am. Ent. Soc.

2. *BANCHUS BOREALIS*.—♂. Pale ferruginous, shining; orbits, clypeus, mandibles, palpi, and four anterior legs yellowish; stripe down middle of face, spot beneath eyes, two spots behind antennæ, band across vertex from eye to eye, covering ocelli, posterior margin of occiput, three broad stripes, sometimes only one, on mesothorax, basal sutures of scutellum and metathorax, spot on pleura beneath, posterior coxæ within and at base beneath, line on posterior femora beneath, and a sub-basal fascia, sometimes irregular, on second and following segments of abdomen above, becoming less distinct on apical segments, black; sometimes the pleura is black with a large ferruginous spot on each side; posterior tibiæ dusky at apex; wings yellowish-hyaline, subviolaceous, slightly dusky at apex, nervures brown, stigma and costa honey-yellow; antennæ brown above; scutellum with an acute spine; metathorax rugulose, posterior angles prominent; abdomen smooth and shining, first segment with prominent stigmatic tubercles. Length $5\frac{1}{2}$ lines.

Hab.—Ottawa, (Billings); London, (Saunders). Coll. Am. Ent. Soc.

3. *BANCHUS CANADENSIS*.—♂ ♀. Ferruginous, dark on head and thorax; face except central stripe, front except two black spots behind antennæ, broad posterior orbits, line on collar, two lines on mesothorax dilated anteriorly, tegulæ, line beneath, scutellum, spot on postscutellum, transverse subangular band on metathorax, spot on each side, elongate spot on pleura, four anterior coxæ beneath, trochanters, spot on posterior coxæ behind, four anterior femora in front, their tibiæ and tarsi, basal half of posterior tibiæ, base of their tarsi, and apical margin of abdominal segments, broadest on second and third, yellow; antennæ blackish, pale at base beneath; central dark stripe of mesothorax, sometimes black; scutellum with a short acute tubercle in ♂, scarcely visible in ♀; wings yellowish-hyaline, nervures brown, stigma and costa pale honey-yellow; tips of posterior tibiæ sometimes blackish; abdomen polished, compressed at apex, which is truncate in ♂, pointed in ♀. Length $4\frac{1}{2}$ –5 lines.

Hab.—Ottawa (Billings); London (Saunders). Coll. Am. Ent. Soc.

4. *AROTES AMOENUS*.—♀. Black, shining; face, orbits, broad behind, mouth, broad annulus on antennæ, large mark on each side of prothorax, margins of mesothoracic lobes, tegulæ, spot beneath, scutellums, large trilobed mark at tip of metathorax, a round spot on the flanks, large mark on each side of pleura, indented with black anteriorly, four anterior legs, spot on posterior coxæ above and beneath, their trochanters, tips of their femora, basal third or half of their tibiæ, their tarsi except claws, and a narrow apical fascia on all the abdominal segments, pale yellow or yellowish-white; wings hyaline, the extreme apex fuscous, nervures black, second recurrent nervure not uniting with the transverse cubital nervure; four anterior femora black behind; first abdominal segment with a prominent sub-basal tooth beneath; venter yellowish, the long acute ventral valve blackish; ovipositor longer than body, rufous, sheaths black. Length $6\frac{1}{2}$ – $7\frac{1}{2}$ lines. ♂, of a brighter yellow; antennæ longer than body, yellow, only its basal half above, black; posterior coxæ yellow with a black line above and within, their femora black above, except tips, sometimes only the extreme base of their tibiæ are yellowish; the abdominal fasciæ are broader, and the basal segment has a central yellow stripe more or less abbreviated behind, and sometimes reduced to a sub-basal spot. Length $5\frac{1}{2}$ – $6\frac{1}{2}$ lines.

Hab.—London, (Saunders); Grimsby, (Pettit). Coll. Am. Ent. Soc. This is a handsome and conspicuous species.

5. *AROTES FORMOSUS*.—♂. Differs from *amœnus* by the yellowish markings being much paler and less developed; the antennæ are black at extreme apex both above and beneath, the sides of the thorax are almost entirely black; the superior wings have a fuscous spot at extreme tip, and the second

recurrent nervure unites with the transverse cubital nervure, by which character it may be readily distinguished from *amoenus*. Length $5\frac{1}{2}$ lines.

Hab.—Ottawa, (Billings). Coll. Am. Ent. Soc.

6. *COLEOCENTRUS PETTITII*.—♀. Black, somewhat shining; wings yellowish-hyaline, nervures black, honey-yellow at base, areolet small, triangular, petiolated; legs honey-yellow, coxæ and posterior tibiæ black, posterior tarsi yellow, dusky at base; abdomen broad at apex, which is compressed and shining; ovipositor as long as body. Length $6\frac{1}{2}$ lines.

Hab.—Grimsby, C. W. (Pettit). Coll. Am. Ent. Soc. In this genus the last ventral segment is long and lanceolate, as in *Arotēs*, but which has the areolet of anterior wings wanting.

This fine species is respectfully dedicated to Johnson Pettit, Esq., of Grimsby, to whom I am indebted for many specimens of Canadian Hymenoptera.

7. *RHYSSA CANADENSIS*.—♀. Black, shining; anterior orbits, interrupted on each side of antennæ, palpi and tegulae white; antennæ brownish at tip and beneath; mesothorax coarsely transversely rugose; metathorax with a broad, deep, longitudinal channel on the disk; wings hyaline, faintly stained with yellowish, nervures black, pale at base, as well as extreme base of stigma, areolet minute, petiolated, sometimes reduced to a mere point; legs bright honey-yellow, tips of all the tarsi, extreme tips of posterior femora, and base and apex of their tibiæ, fuscous, middle of tibiæ pale; abdomen long, minutely transversely aciculate; ovipositor longer than body, piceous, sheaths black. Length 7–8 lines.

Hab.—Quebec (Couper). Coll. Am. Ent. Soc. Mr. Couper informs me that this insect was found "boring into a pine tree."

8. *EPHIALTES MACER*.—♀. Slender, black, shining, with short, thin, glittering, cinereous pile; cheeks and sides of thorax polished; clypeus reddish; palpi whitish; metathorax with a shallow central channel; tegulae, and sometimes a short line in front, whitish; wings hyaline, beautifully iridescent, nervures brown, areolet triangular; legs honey-yellow, front coxæ, except dusky spot in front, their trochanters, and apex of four posterior trochanters, whitish; tips of posterior femora, their tibiæ and tarsi more or less dusky, the tibiæ more or less pale at middle and within, and sometimes the middle tibiæ and tarsi are varied with dusky, the posterior coxæ in one specimen are dusky behind; abdomen long, cylindrical, surface uneven, densely punctured and somewhat shining, subpubescent, posterior margin of the segments unevenly transversely wrinkled, first segment shorter than second, the second to fifth one-third longer than wide; ovipositor twice, sometimes nearly four times longer than body, very slender, rufous, sheaths

black. Length 4-5 lines; with ovipositor 11-19 lines. ♂ has antennæ brown, pale beneath; legs paler than in ♀, the anterior coxæ and trochanters white, posterior legs more or less obfuscated, base of their tibiæ and of their tarsi white; abdomen with first segment about as long as second, with two longitudinal ridges, most prominent at base. Length $2\frac{1}{2}$ -3 lines.

Hab.—Ottawa (Billings); London (Saunders). Coll. Am. Ent. Soc. This is the smallest and most slender of our North American species.

9. PERITHOUS PLEURALIS. — ♀. Black, shining; anterior orbits, basal margin of clypeus, mandibles, palpi, scape beneath, tip of scutellums, spot beneath posterior wing, arched line on tip of metathorax, four anterior coxæ, all the trochanters, anterior legs in front, and posterior margin of abdominal segments, interrupted laterally by a dusky spot, white; scutellum, pleura, sometimes the anterior portion of mesothorax, tibiæ, and posterior coxæ, honey-yellow; antennæ brownish; wings hyaline, iridescent, nervures brown, pale at base, as well as a spot at base of stigma; tibiæ and tarsi whitish, tips of posterior femora, a line on outside of all the tibiæ, encircling the apex of posterior pair, and tips of tarsal joints, blackish; segments of abdomen shining, with a lateral blister-like elevation on each, two basal segments with thick coarse punctures, remainder with sparse punctures; ovipositor longer than body. Length $4\frac{1}{2}$ - $6\frac{1}{2}$ lines.

Hab.—Grimsby, C. W. (Pettit). Coll. Am. Ent. Soc. Closely resembles the European *P. mediator*, but differs in the ornamentation of the legs.

10. ARENETRA CANADENSIS. — ♂. Deep black, densely and coarsely punctured; head, thorax and base of legs, thickly clothed with short black pubescence, most dense on the head; antennæ long, slender; wings hyaline, nervures black, areolet small, triangular, subpetiolate; apex of femora, the tibiæ and tarsi dull testaceous, posterior pair pale fuscous; abdomen narrow, subdepressed, shining at tip, apical margin of third and following segments with a very narrow pale fascia. Length 5 lines.

Hab.—London, C. W. (Saunders). Coll. Am. Ent. Soc. Very closely allied to *A. nigrita*, Walsh, which has the pubescence less dense, and whitish.

11. LISSONOTA RUFIPES. — ♀. Black, somewhat shining; legs rufous, the coxæ, trochanters, and posterior tibiæ and tarsi black; middle tibiæ and tarsi sometimes dusky; wings dusky hyaline, iridescent, nervures black, areolet small, petiolated; abdomen shining at tip; ovipositor longer than body; body densely punctured, most sparse on abdomen. Length $4\frac{1}{2}$ lines.

Hab.—Grimsby, C. W. (Pettit). Coll. Am. Ent. Soc.

12. LISSONOTA FRIGIDA. — ♀. Black; head and thorax densely punctured, opaque; abdomen shining, delicately punctured, polished at apex; wings dusky hyaline, iridescent, areolet triangular, not petiolated; legs, including

coxæ, and abdomen except base of first and the two or three apical segments, rufo-ferruginous; four posterior trochanters and posterior tibiæ and tarsi fuscous; ovipositor as long as body. Length $3\frac{1}{2}$ lines.

Hab.—Ottawa (Billings); London (Saunders). Coll. Am. Ent. Soc.

13. *LISSONOTA BRUNNEA*.—♀. Entirely brownish ferruginous, subopaque, four anterior legs paler; body covered with dense punctures; anterior orbits, mouth, and tegulæ, yellowish; wings yellowish-hyaline, nervures black, areolet small, petiolated; ovipositor as long as body, rufopiceous. Length $5-5\frac{1}{2}$ lines.

Hab.—Ottawa, C. W. (Billings). Coll. Am. Ent. Soc.

14. *XORIDES VITIFRONS*.—♀. Black, shining; anterior orbits, face except upper margin, spot on base of mandibles, palpi, line on collar, lateral margin of mesothorax, spot on scutellum, another on post-scutellum, tegulæ, and narrow fascia on apical margin of each segment of abdomen, abbreviated laterally on basal segments, white; wings hyaline, nervures black; legs, including coxæ, honey-yellow; anterior pair and spot on base of posterior coxæ above, yellowish; apex of posterior femora, their tibiæ and the four posterior tarsi, fuscous; mesothorax transversely rugose, middle lobe very prominent; metathorax rugulose, sub-pubescent; ovipositor as long as body, slender, reddish, sheaths black. Length 9 lines.

Hab.—London, C. W. (Saunders). Coll. Am. Ent. Soc. The white spot on the face is more or less indented with black above, and sometimes completely divided longitudinally by a black line; the posterior legs, except coxæ, are sometimes more or less obfuscated, with the extreme base of their tibiæ pale.

15. *ECHTHRUS NIGER*.—♀. Deep black, subopaque, mesothorax shining; tip of labrum, annulus on antennæ, tegulæ, and the dilated anterior tibiæ in front, white: legs tinged with piceous; wings hyaline, faintly dusky at tips, nervures black; metathorax rugose, elevated on the disk; ovipositor longer than body, reddish, sheaths black, whitish at tip within. Length $7\frac{1}{2}$ lines. ♂. Smaller and very slender, shining; antennæ entirely black, nearly as long as the body; lateral margin of face, tip of labrum, spot on clypeus, spot beneath eyes, tegulæ, tips of anterior femora, and a line on outside of all the tibiæ, white. Length 6 lines.

Hab.—Ottawa, C. W. (Billings). Coll. Am. Ent. Soc. Very closely allied to the European *E. reluctator*, but readily distinguished by the white tegulæ.

16. *ECHTHRUS ABDOMINALIS*.—♀. Black, subopaque; antennæ with a broad whitish annulus; wings hyaline, tinged with yellowish, nervures black, stigma reddish; palpi, legs and abdomen, rufous; tegulæ reddish; ovipositor

as long as the body, reddish; metathorax as in the preceding species. Length 6 lines. ♂. Much slenderer than ♀, with lateral margin of face, scape of antennæ beneath, and tegulæ, pale; antennæ entirely black; posterior tibiæ dusky, their tarsi pale; abdomen petiolated, long, thickened toward apex. Length $5\frac{1}{2}$ lines.

Hab.—Ottawa, C. W. (Billings). Coll. Am. Ent. Soc.

LUMINOUS LARVÆ.

We have received the following note from Baron Osten Sacken, of New York, on the subject of our larva:—

“A luminous larva is mentioned in your No. 4, p. 30. Is it not the larva of *Melanactes*, described and figured by me in the Pro. Ent. Society, Phil. 1862, p. 125, Tab. i. fig. 8, under the name of ‘Unknown larvæ?’

“At that time I was uncertain about the genus of the larvæ, as well as about the fact of their being luminous. But in a notice which was published in the same proceedings subsequently I communicate the fact, that I found the same larva alive, that it is luminous, and that it probably belongs to the genus *Melanactes*.

“The latter article I cannot refer to now, as I have not the book at hand. But it may be found in the Proc. Ent. Soc. Phil., in one of the years after 1862, in the form of a letter read at one of the meetings of the Society.

“R. OSTEN SACKEN.”

The notice referred to we have found in the Pro. Ent. Soc. Phil., Vol. iv. No. 2, in the minutes of a meeting of the Society held on April 10, 1865 (p. 8). The Baron, after referring to his paper and figure in 1862. states that, “Last September Mr. J. Carson Brevoort was fortunate enough to find one of the large larvæ near West Point, N. Y., under a stone. The specimen is *three inches long*, and belongs to the same species as that which I had figured. In the dark, *this larva emits a soft green light*, shining principally through the sides of the body and the venter; on the back it appears only in the intervals between the horny segments. The whole length of the larva being thus illuminated in the dark, when it moves briskly about, it is a most beautiful object. The larva is still alive, although I have little hopes that it will undergo its transformation in captivity. But I have not the slightest doubt now that it belongs to *Melanactes*, the more so as this genus, in Dr. LeConte’s arrangement, is placed in the same subtribe (*Corymbitini*) with *Pyrophorus*. At the time when I first described this larva, all the large specimens which I possessed came from the South (Arizona, New Mexico, Louisiana), and I was not aware that such specimens could be found in the Middle States, and as the largest *Melanactes* occurs in the latter States, this made me doubt that the larva could belong to that genus. The discovery of